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an air inlet tube having an inlet, an outlet, a first opening, and a second opening spaced a distance from the first opening and of substantially similar size to the first opening;

a tuning tube connected between the first opening and the second opening of the air inlet tube and having a length greater than the distance between the first and second openings in the inlet tube and arranged such that noise traveling simultaneously into the tuning tube and through the inlet tube converge at the second opening.

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33. (New) The air intake silencer of claim 32 wherein the length of the tuning tube is longer than the length between the first and second openings in the air inlet tube such that noise traveling through the tuning tube exits the tuning tube about one-half wavelength behind noise traveling through the air inlet tube.

34. (New) The air intake silencer of claim 32 wherein the tuning tube is in continual communication with the air intake tube.

35. (New) The air intake silencer of claim 32 incorporated into an outboard engine.

REMARKS

Claims 1-12 and 14-28 are pending in the present application. In the Office Action of October 23, 2002, the Examiner initially objected to the drawings and informalities in claims 1 and 21. The Examiner rejected claims 1-8 under 35 U.S.C. §112, second paragraph. Claims 1-5 and 8 were rejected under 35 U.S.C. §102(b) as being anticipated by Takeda (USP 4,538,556). Claims 1, 3-5, 7, and 8 were rejected under 35 U.S.C. §102(e) as being anticipated by Bloomer (USP 6,422,192). Claims 1-5, 7, and 8 were rejected under 35 U.S.C. §102(b) as being anticipated by JP 02-091419. Claims 21 and 22 were rejected under 35 U.S.C. §102(b) as being anticipated by Kiekhacfer (USP 2,971,507). Claims 7 was rejected under 35 U.S.C. §103(a) as being unpatentable over Takeda. Claims 21-25, 27, and 28 were rejected under 35 U.S.C.

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§103(a) as being unpatentable over Heidner in view of Bloomer. Claims 9-11, 13-18, 20-25, 27, and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ferguson (USP 4,978,321) in view of Bloomer.

The Examiner indicated that Applicant's Amendment was dated July 3, 2002 in subparagraph (B) of paragraph two on page 3 of the Detailed Action. However, the Preliminary Amendment and the RCE were filed on June 28, 2002. Enclosed is a copy of the request with the executed Certificate of Mailing showing a June 28, 2002 mailing date.

Applicant appreciates the Examiner's indication of allowable subject matter contained within claims 6, 12, 19, and 26. It is noted that claim 6 is not listed as an "Objected To" claim in the Office Action Summary, but is indicated as containing allowable subject matter on page 9 of the Detailed Action. Since there is no substantive rejection of claim 6, it is believed that it was an oversight not to list claim 6 in the "Objected To" category of the Office Action Summary. Accordingly, new claim 31 includes the subject matter of claims 1 and 6. Regarding claims 12, 19, and 26, Applicant believes that these claims depend from what is believed to be otherwise allowable base claims as set forth in detail below.

Initially, the Examiner objected to the drawings under 37 CFR 1.83(a). The Examiner underlined several features, and Applicant assumes that it is these underlined features that the Examiner questions whether they are shown in the drawings. One of the features is an outboard engine cover. Such is shown and described with reference to Fig. 1 in the current application. Also, the Examiner is directed to Figs. 6-8 which, as described in the Brief Description of the Drawings, are schematic illustrations of several embodiments of an "engine cover incorporating an air intake silencer." The Examiner is also referred to the Detailed Description setting forth an explanation of these figures. The Examiner underlined "a tuning tube in communication with an inlet tube." Such is clearly shown and described with reference to Figs. 2 and 3. The Examiner also underlined "attached to a bottom wall of the cover." Such is clearly shown with reference to Fig. 6. The Examiner also underlined "a tube in a wrap around relationship with another tube." Such is clearly shown in Figs. 3 and 5.

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The Examiner objected to claims 1 and 21. Claim 1 has been amended to delete the comma after "a second". Additionally, claim 20 of Applicant's June 28, 2002 Preliminary Amendment has been changed to claim 21 herein.

Applicant has amended independent claim 1 to correct for the §112 rejection. Claim 1 now calls for at least one tuning tube comprising a first end and a second end in direct and uninterrupted fluid communication with said inlet passage. Applicant believes that amended claim 1 satisfies §112, second paragraph.

The Examiner rejected claims 1-5 and 8 under §102(b) as being anticipated by Takeda. Applicant has amended claim 1 to further define the present invention. The amended claim now calls for a tuning tube that is in uninterrupted fluid communication with the air inlet pipe to more clearly define the present invention over the prior art.

Takeda refers to a tuning tube rather than a resonance chamber. Additionally, the resonance chamber of Takeda operates under the controlled vacuum valve 7 rather than being a tuning tube that operates continually to provide sound wave cancellation, as in the present invention. Accordingly, claim 1 has been amended to set forth that the direct fluid communication between the at least one tuning tube and the inlet passage of the air inlet plate is a direct and uninterrupted fluid communication. This defines the present invention as a tuning passage and clearly defines over the prior art.

As such, Applicant believes that which is called for in amended claim 1 is patentably distinct over Takeda.

The Examiner rejected claims 1, 3-5, 7, and 8 under §102(e) as being anticipated by Bloomer. Applicant disagrees. While Applicant does not admit that Bloomer is valid prior art, and reserves the right to antedate this reference, Applicant believes that there are significant distinctions between Bloomer and the claims rejected and elects to hereby address those distinctions at this time.

As amended, claim 1 calls for a tuning tube that is in uninterrupted fluid communication with an air intake pipe. Bloomer discloses an air intake pipe that is a resonance chamber. Bloomer discloses one path that functions both as a resonance chamber and an air intake. Col. 3, lns. 35-47. This is not the same as an intake pipe and a tuning tube as called for and now clearly defined in claim 1. The two flow paths of

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Bloomer are selected in the alternative not in the conjunctive as called for in the present invention. A person of ordinary skill in the art would recognize that the air intake pipe of Bloomer is both an air intake pipe and a resonance chamber within one fluid path, not an air inlet pipe and a tuning tube called for in the present invention. Referring to Fig. 6 of Bloomer, the fluid path, the air intake, and the resonance chamber form a single path 219, or 220, depending on the position of the flap valve 217, but not the two paths called for in the present invention. Bloomer does not have an air intake pipe and a tuning tube in uninterrupted fluid communication with the air intake pipe as called for in the present invention. Bloomer discloses only one fluid path with a resonance chamber with one opening to the air intake path in either position of valve 217. Fig. 6. Col. 3, lns. 36-47.

As such, Applicant believes that which is called for in amended claim 1 defines over Bloomer, and as such, requests allowance of claim 1 and those claims dependent therefrom.

The Examiner next rejected claims 1-5, 7, and 8 under §102(b) as being anticipated by JP '419.

JP '419 calls for a resonance chamber with three separate solenoid valves. One of the three valves is open at a particular instant. This being the case, the resonance chamber of JP '419 does not have a first end and second end that are in uninterrupted fluid communication with the air intake pipe as now called for in claim 1. The resonance chamber of JP '419 has only one fluid path with the air intake pipe. This one path is variable between lines controlled by valves 11, 12, or 13. This is not the same as a tuning tube with a first end and a second end in uninterrupted fluid communication with air intake pipe as called for in the instant invention.

As such, Applicant believes that which is now called for in claims 1-5, 7, and 8 are patentably distinct over JP '419.

The Examiner also rejected claims 21 and 22 under §102(b) as being anticipated by Kickhafer. The Examiner stated that Kickhafer "discloses a silencer integrally formed with a cover of an outboard motor having an air inlet 13, an air inlet pipe 20 defining a chamber 23 and coupled to the air inlet and at least one tuning tube 28 in flow communication with the inlet pipe." Applicant disagrees.

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Kickhafer discloses a configuration of several sound absorbing chambers partitioned by walls and connected via connecting tubes. Col. 2, lns. 10-19. Additionally, Kickhafer discloses that "air entering the grill 13 passes through chambers 24, 23 and 16 and 17 in a tortuous path defined by the particular relative location of the chambers and the disposition of their tube openings." Col. 2, lns. 34-37. Kickhafer does not disclose an air inlet pipe coupled to an air inlet and a tuning tube in flow communication with the air inlet pipe as called for in claim 21. Should the Examiner disagree, clarification of the rejection is requested.

As such, Applicant believes that which is called for in claim 21 defines over the art of record and requests withdrawal of the Examiner's rejection.

The Examiner next rejected claim 7 under §103(a) as being unpatentable over a single reference – Takeda. The Examiner admits that Takeda does not show an integrally formed inlet tube and states that "making both tubes integral as a single unit would reduce the number of components thereby reducing assembly time and labor." In doing so, the Examiner overlooks the placement of valve 7 disposed in an interconnecting portion between the tank 4 and intake passage 6 of Takeda. Additionally Takeda teaches away from the removal of the valve in that the reference discloses that the inclusion of the valve actually enhances performance. Col. 1, lns. 16-23. When Applicant claims that its at least one tuning tube is in direct and uninterrupted fluid communication with the inlet passage, Applicant is claiming a tuning tube that does not include such a valve that interrupts fluid communication.

Therefore, Applicant believes that which is called for in claim 7 is patentably distinct over Takeda.

The Examiner next rejected claims 21-25, 27, and 28 under §103(a) over Heidner in view of Bloomer. Applicant disagrees.

In addition to the arguments above in reference to Bloomer, Heidner relies on the use of a sound absorbing material and baffles to reduce unwanted sound transmission. Col. 2, lns. 36-45. A person of ordinary skill in the art of marine engine design would not find an air intake silencer coupled to an air inlet where the intake silencer is comprised of

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a tuning tube in flow communication with the air inlet pipe to be an obvious variation of the baffle and soundproofing materials of Heidner when considered in light of Bloomer.

As such, Applicant believes that which is called for in claim 21 is patentably distinct over the art of record.

Next, the Examiner rejected claims 9-11, 13-18, 20-25, and 28 under §103(a) over Ferguson in view of Bloomer.

In addition to the arguments raised above with respect to Bloomer, Ferguson discloses a combination of baffles that act in combination with the lower engine housing to provide combustion air to the engine. Col. 1, lns. 45-48. Additionally, Ferguson discloses that the upper cover is provided with an internal baffle 26 which is connected to and sealed with respect to the inside of the upper cover 22. Col. 2, lns. 41-43. The reference further discloses that the internal baffle 26 defines in combination with the insides of the upper cover an upper chamber. Col. 2, lns. 47-48. A person of ordinary skill in the art would recognize that this is not an integrally formed air intake silencer as called for in claim 9. Additionally, the silencing effect of Ferguson is accomplished through the tortured travel of the air through a series of baffles and ducts. In Ferguson, the air intake and the air silencer are the same path. Unlike the art of record, claim 21 calls for an air intake silencer coupled to an air inlet where the air silencer includes a tuning tube in flow communication with the air inlet pipe.

As such, Applicant believes that which is called for in claims 9 and 21, and those claims that depend therefrom, is patentably distinct over the art of record.

Regarding the Examiner's rejection of claims 7, 9-11, 14-18, 20, 22-25, 27 and 28 under 35 U.S.C. §103(a), Applicant respectfully disagrees with the Examiner with respect to the art. In light of each of the aforementioned claims depending from what is believed an otherwise allowable claim, Applicant does not believe additional remarks are necessary and therefore requests allowance for claims 2-8, 10-12, 14-20, and 22-28 pursuant to the chain of dependency.

New claim 31 has been added that includes the subject matter of allowable claim 6 and claim 1. Additionally, Applicant submits for consideration new claims 32-35. Applicant believes that new independent claim 32 is allowable over the prior art of record.

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since the prior art does not show an air inlet tube having an inlet, an outlet, a first opening, and a second opening wherein the first and second openings are spaced a distance apart and a tuning tube is connected to the first and second openings of the air inlet tube, and the tuning tube has a length greater than the distance between the first and second openings in the inlet tube. The tuning tube is arranged such that noise traveling simultaneously into the tuning tube and through the inlet tube converge at the second opening. As called for in dependent claim 33, the tuning tube is preferably designed such that noise traveling through the air inlet tube converges approximately one-half wave length apart from that traveling through the air inlet tube.

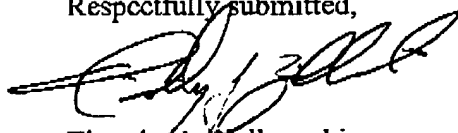
Therefore, in light of the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-12, 14-28, and 31-35.

Marked-up versions of the amendments made above may be found on page 11.

A credit card authorization in the amount of \$110.00 is enclosed for fees associated with the Petition for Extension of Time together with a credit card authorization in the amount of \$204.00 associated with entering the claims newly presented herein.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,



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REVISIONS

1. (~~Thrice~~Twice amended) An air intake silencer comprising:

at least one air inlet pipe comprising a first end, a second end, and an inlet passage therethrough;

at least one tuning tube comprising a first end and a second end, ~~said first end and said second end~~ in direct and uninterrupted fluid communication with said inlet passage to form a tuning passage, said tuning passage extending for a length selected to cancel noise of at least a first selected frequency passing through said inlet pipe.

~~3021.~~ (~~Twice~~Thrice Amended) An outboard motor engine comprising:

a motor cover;

at least one air inlet for engine intake air; and

an air intake silencer coupled to said air inlet and integrally formed with said motor cover, said air intake silencer comprising at least one air inlet pipe coupled to said air inlet and at least one tuning tube in flow communication with said air inlet pipe, said air inlet pipe and said tuning tube configured to cancel a portion of sound traveling through said air inlet pipe.